ARG57238
anti-Histone H2B phospho (Ser14) antibody [RM238]

Package: 50 µg
Store at: -20°C

Summary

Product Description	Rabbit Monoclonal antibody [RM238] recognizes Histone H2B phospho (Ser14)
Tested Reactivity	Hu
Tested Application	ICC/IF, WB
Specificity	This antibody reacts to Histone H2B only when phosphorylated at serine 14. No cross reactivity with other phosphorylated histones.
Host	Rabbit
Clonality	Monoclonal
Clone	RM238
Isotype	IgG
Target Name	Histone H2B
Species	Others
Immunogen	A phospho-peptide corresponding to Phospho-Histone H2B (Ser14).
Conjugation	Un-conjugated
Alternate Names	Histone H2B.f; Histone H2B type 1-B; Histone H2B.1; H2B/f; H2BFF; H2B.1

Application Instructions

Application table

Application	Dilution
ICC/IF	1 - 2 µg/ml
WB	0.5 - 2 µg/ml

Application Note: * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

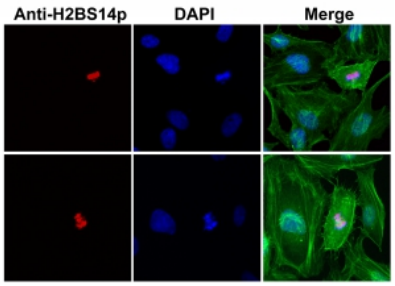
Form	Liquid
Purification	Purification with Protein A.
Buffer	PBS, 0.09% Sodium azide, 50% Glycerol and 1% BSA.
Preservative	0.09% Sodium azide
Stabilizer	50% Glycerol and 1% BSA
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

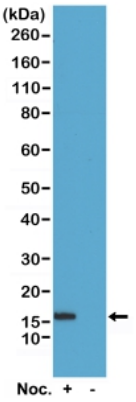
Database links	GeneID: 3018 Human Swiss-port # P33778 Human
Gene Symbol	HIST1H2BB
Gene Full Name	histone cluster 1, H2bb
Background	Histones are basic nuclear proteins that are responsible for the nucleosome structure of the chromosomal fiber in eukaryotes. Nucleosomes consist of approximately 146 bp of DNA wrapped around a histone octamer composed of pairs of each of the four core histones (H2A, H2B, H3, and H4). The chromatin fiber is further compacted through the interaction of a linker histone, H1, with the DNA between the nucleosomes to form higher order chromatin structures. This gene is intronless and encodes a replication-dependent histone that is a member of the histone H2B family. Transcripts from this gene lack polyA tails; instead, they contain a palindromic termination element. This gene is found in the large histone gene cluster on chromosome 6p22-p21.3. [provided by RefSeq, Aug 2015]
Function	Core component of nucleosome. Nucleosomes wrap and compact DNA into chromatin, limiting DNA accessibility to the cellular machineries which require DNA as a template. Histones thereby play a central role in transcription regulation, DNA repair, DNA replication and chromosomal stability. DNA accessibility is regulated via a complex set of post-translational modifications of histones, also called histone code, and nucleosome remodeling. [UniProt]
PTM	Monoubiquitination at Lys-35 (H2BK34Ub) by the MSL1/MSL2 dimer is required for histone H3 'Lys-4' (H3K4me) and 'Lys-79' (H3K79me) methylation and transcription activation at specific gene loci, such as HOXA9 and MEIS1 loci. Similarly, monoubiquitination at Lys-121 (H2BK120Ub) by the RNF20/40 complex gives a specific tag for epigenetic transcriptional activation and is also prerequisite for histone H3 'Lys-4' and 'Lys-79' methylation. It also functions cooperatively with the FACT dimer to stimulate elongation by RNA polymerase II. H2BK120Ub also acts as a regulator of mRNA splicing: deubiquitination by USP49 is required for efficient cotranscriptional splicing of a large set of exons. Phosphorylation at Ser-37 (H2BS36ph) by AMPK in response to stress promotes transcription (By similarity). Phosphorylated on Ser-15 (H2BS14ph) by STK4/MST1 during apoptosis; which facilitates apoptotic chromatin condensation. Also phosphorylated on Ser-15 in response to DNA double strand breaks (DSBs), and in correlation with somatic hypermutation and immunoglobulin class-switch recombination. GlcNAcylation at Ser-113 promotes monoubiquitination of Lys-121. It fluctuates in response to extracellular glucose, and associates with transcribed genes (By similarity). Crotonylation (Kcr) is specifically present in male germ cells and marks testis-specific genes in post-meiotic cells, including X-linked genes that escape sex chromosome inactivation in haploid cells. Crotonylation marks active promoters and enhancers and confers resistance to transcriptional repressors. It is also associated with post-meiotically activated genes on autosomes.

Images



ARG57238 anti-Histone H2B phospho (Ser14) antibody [RM238] ICC/IF image

Immunofluorescence: HeLa cells stained with ARG57238 anti-Histone H2B phospho (Ser14) antibody [RM238] (red). Actin filaments have been labeled with fluorescein phalloidin (green), and nuclei stained with DAPI (blue).



ARG57238 anti-Histone H2B phospho (Ser14) antibody [RM238] WB image

Western blot: Acid extracts of HeLa cells treated or non-treated with Nocodazole, stained with ARG57238 anti-Histone H2B phospho (Ser14) antibody [RM238] at 0.5 µg/ml, showed a band of Histone H2B phosphorylated at Serine 14 in HeLa cells.